

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF APS PUSHBUTTONS AND SIGNS AT THE INTERSECTION OF MD 140 (REISTERSTOWN RD) AT RITTERS LN AND ENCHANTED HILLS RD.  
MD 140 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA FOUR-PHASE FULL-TRAFFIC-ACTUATED MODE WITH AN ALTERNATE PEDESTRIAN PHASE FOR THE SOUTH LEG OF THE INTERSECTION. ALL APPROACHES OPERATE IN PERMISSIVE PHASING.

CONTROLLER REQUIREMENTS

THE EXISTING FULL-TRAFFIC-ACTUATED EIGHT-PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A POLE MOUNTED CABINET SHALL REMAIN. THE EXISTING VIDEO DETECTION INTERFACE EQUIPMENT SHALL BE REMOVED. IP-BASED VIDEO DETECTION INTERFACE EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY SHA. A 2-WIRE APS CENTRAL CONTROL UNIT SHALL BE FURNISHED BY THE CONTRACTOR AND INSTALLED BY SHA.

SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:

TO CROSS MD 140 (REISTERSTOWN RD):

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS REISTERSTOWN AT ENCHANTED HILLS AND RITTERS. WAIT."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS ENCHANTED HILLS RD:

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS ENCHANTED HILLS AT REISTERSTOWN. WAIT."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

EQUIPMENT LIST "A, B & C"

A. EQUIPMENT TO BE SUPPLIED BY SHA.

ITEM NO.	DESCRIPTION
900000	SHEET ALUMINUM GROUND MOUNTED SIGN 8 - S1-1 FYG 36"x36" 2 - W11-2 FY 36"x36" 8 - M6-2 FYG 30"x24" 2 - M6-2 FY 30"x24" 1 - OM1-3 FY 18"x18"
900000	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN 4 - R10-3(1) 9"x15"
900000	VIDEO DETECTION INTERFACE EQUIPMENT: 1-8 CAMERAS

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION
100000	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
201032	CLASS 2 EXCAVATION
585621	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585700	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH
600000	TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH
600000	TYPE A CURB ANY HEIGHT OR DEPTH
600000	DETECTABLE WARNING SURFACE FOR CURB RAMPS (TYPE 3 BRICK PAVERS)
655105	5 INCH CONCRETE SIDEWALK
704345	PLACING FURNISHED TOPSOIL 4 INCH DEPTH
708220	TURFGRASS SOD ESTABLISHMENT
800000	2-WIRE APS CENTRAL CONTROL UNIT
800000	ADJUST HANDHOLE TO GRADE AND REPLACE FRAME AND COVER
800000	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	IP-BASED VIDEO DETECTION CAMERA & ANY LENGTH LEAD-IN CABLE
800000	5 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)
800000	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
800000	WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH
800000	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
800000	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)

C. ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE.
3. ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
4. UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "MISS UTILITY" PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
5. ALL PEDESTAL FOUNDATION TOPS SHALL BE INSTALLED FLUSH WITH SIDEWALK GRADE.
6. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MD MUTCD CHAPTER 4E "PEDESTRIAN CONTROL FEATURES" AND FIGURES 4E-3 AND 4E-4, AND THE LATEST NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
7. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" X 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
8. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER OF POLE TO CENTER OF POLE.
9. PUSHBUTTON ARROWS AND SIGNS ARE TO BE ORIENTED PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
10. VIDEO DETECTION CAMERA ALIGNMENT SHALL BE COORDINATED WITH THE ENGINEER.
11. THE CONTRACTOR SHALL CAP AND ABANDON CONDUITS FEEDING EXISTING SIGNAL EQUIPMENT THAT IS REMOVED.
12. THE CONTRACTOR SHALL CONTACT ED HODENHIZER AT THE SIGNAL SHOP (410-787-7652) TO DELIVER APS EQUIPMENT FOR TESTING.

WIRING KEY

A,B,C	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
D,E	IP-BASED VIDEO DETECTION CAMERA CABLE
Z	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
EX	USE EXISTING CABLE
PF	EXISTING OVERHEAD POWER FEED
+	EXISTING GROUND ROD
+	PROPOSED GROUND ROD

BCE # 211617

EXISTING OVERHEAD I/C NORTH TO DOLFELD BLVD

PHASING CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	(R)	(R)	(R)	(Y)	(Y)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)
	(Y)	(Y)	(Y)	(G)	(G)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)
	(G)	(G)	(G)			(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)
PHASE 2 AND 6	G	G	G	DARK/DARK	G	G	R	R	R	R	R	R	DW	DW	WK	WK
PED CLEARANCE	G	G	G	DARK/DARK	G	G	R	R	R	R	R	R	DW	DW	FL/DW	FL/DW
2 AND 6 CHANGE	Y	Y	Y	FL/YFL/Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 4 AND 8	R	R	R	FL/YFL/Y	R	R	G	G	G	G	G	G	DW	DW	DW	DW
4 AND 8 CHANGE	R	R	R	FL/YFL/Y	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 AND 8 ALT	R	R	R	FL/YFL/Y	R	R	G	G	G	G	G	G	WK	WK	DW	DW
PED CLEARANCE	R	R	R	FL/YFL/Y	R	R	G	G	G	G	G	G	FL/DW	FL/DW	DW	DW
4 AND 8 ALT CHANGE	R	R	R	FL/YFL/Y	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/YFL/Y	FL/YFL/Y	FL/YFL/Y	DARK/DARK	FL/YFL/Y	FL/YFL/Y	FL/YFL/Y	FL/YFL/Y	FL/YFL/Y	FL/YFL/Y	FL/YFL/Y	FL/YFL/Y	DW	DW	DW	DW

CONTACT PERSONS FOR DISTRICT #4 ARE AS FOLLOWS:

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**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 140 (REISTERSTOWN RD) AT  
RITTERS LN / ENCHANTED HILLS RD  
OWINGS MILLS, MARYLAND

REVISIONS	GENERAL INFORMATION SHEET
	SCALE <u>NONE</u> DATE <u>MARCH 2013</u> CONTRACT NO. <u>XY1515185</u>
	DESIGNED BY <u>WFW</u> COUNTY <u>BALTIMORE</u>
	DRAWN BY <u>WFW</u> LOGMILE <u>03014006.23</u>
	CHECKED BY <u>BJG</u> TMS NO. <u>L825</u>
	FAP NO. <u></u> TOD NO. <u></u>
	TS NO. <u>169H-G1</u> DRAWING <u>SP-2</u> OF <u>2</u> SHEET NO. <u>2</u> OF <u>3</u>

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PLOTTED: Tuesday, March 05, 2013 AT 08:57 AM  
FILE: \\batsrv03\y2008\00148\_00000\Task 148\_MD 140 at Home Depot & Ritters (L704)\CADD\SG-0002\_MD140@RittersLn-G1.dgn